GW27-e0535

Comparative analysis of risk factors coronary heart disease among women in fertile age and in monopauze

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OBJECTIVES Many epidemiological studies highlight the so-called risk factors (RF), the presence of which increases the likelihood of developing cardiovascular disease and worsens its forecast. In the development of coronary heart disease (CHD) in women, in addition to traditional RF (arterial hypertension (AH), obesity, lipid disorders, diabetes) is isolated and specific RF, such as menopause, use of oral contraceptives etc.

To conduct a comparative analysis of the occurrence of the major risk factors of CHD in women of childbearing age and menopause.

METHODS 200 women were examined with established CHD, who were selected as a result of the epidemiological and clinical examination. In the reproductive age was 79, and in menopause- 121.

All surveyed conducted ECG study, measured blood pressure (BP), defined abdominal obesity (AO) and determined the anthropometric data with the calculation of the index of Ketlet and studied lipid profile - total cholesterol (TC), triglycerides (TG), and calculated atherogenic index (AI). Low physical activity (LPA) was determined by filling in a special questionnaire.

The obtained data were processed by methods of medical statistics.

RESULTS The study found that the overall frequency of all studied RF registration with almost equal frequency in women met in both age groups. The most common RF were AO, which amounted to 94.5% in the fertile and 93.2% in menopause age. Then followed overweight (BMI), which in postmenopausal women was greater than that in fertile period- 93.5% and 91.7% respectively. Such an important RF as AH is much more common in women in menopause, compared with patients of fertile age (61.4% and 27.3%). From the lipid profile prevailed gipertriglitsiridemiya (GTG)-81.8% in menopause, against 70.9% in reproductive age), then hypercholesterolemia (GC)-63.0 and 78.2%, respectively), LDL -C-(46.4 and 70.2% respectively), with almost the same frequency occurs AI (49.5 and 67.3%, respectively). LPA also more frequent in postmenopausal women compared with those of fertile age (81.8 and 67.3%, respectively).

CONCLUSIONS

1 This study showed that among women with CHD is the most common RF such AO, BMI, GTG, and GC.

2 In both age groups all the RF with the exception of AH occur with equal frequency.

3 In comparison with persons of fertile age AH is more common in postmenopausal women.

GW27-e0546

The Role of Insulin Resistance and Metabolic Risk Factors on Culprit Coronary Plaque

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OBJECTIVES Detailed relationships between insulin resistance (IR) and vulnerable plaque are not clear, therefore, we sought the role of IR and metabolic risk factors on culprit coronary plaque.

METHODS Plaque components at a region of interest (ROI, 10mm) were analyzed by virtual histology intravascular ultrasound. IR was defined as quantitative insulin sensitivity check index (QUICKI) ≤ 0.33. Seven metabolic risk factors (5 risk factors for metabolic syndrome defined by ATP III, history of smoking, hsCRP) for IR were determined.

RESULTS The data for 150 (males 104) patients were analyzed. Patients with IR (n = 69) had greater necrotic core (NC) at ROI (21.2 ± 15.8 mm3 vs 15.7 ± 11.9 mm3, p = 0.02) than in patients without IR (n = 81). The NC at ROI was correlated with QUICKI (r = -0.16, p = 0.05), HbA1C (r = 0.24, p < 0.01), body mass index (r = 0.17, p = 0.04), presence of diabetes mellitus (r = 0.29, p < 0.001), hsCRP (r = 0.17, p = 0.04) and the numbers of risk factors for IR (r = 0.41, p < 0.001). The multivariate analysis revealed that the numbers of risk factors for IR was an independent factor for NC at ROI (beta coefficient = 0.44, p = 0.003), but QUICKI was not (beta coefficient = -0.01, p = 0.94).

CONCLUSIONS Instead of a single measurement of IR index or each metabolic risk factor, clustering of risk factors for IR plays an important role on plaque vulnerability.

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Effect of Angiotensin-Converting Enzyme Inhibitors/Angiotensin Receptor Blocker on the progression of coronary atherosclerosis: A Serial OCT and IVUS Study

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OBJECTIVES Collaborative meta-analysis of randomized trials reported that ACEI or ARB is beneficial in patients with atherosclerotic disease even if their systolic pressure is less than 130mm Hg before treatment. However, whether the therapy of ACEI or ARB has an effect on the progression of atherosclerosis is unknown.

METHODS 69 patients who had coronary artery disease with 97 lipid-rich plaques were enrolled in the present study. Among them, 31 patients with 46 plaques entered into the group of ACEI/ARB and the other 38 patients with 51 plaques entered into the counterpart group. All the patients were under the therapy of statin, but the distribution of type and dosage were not different among the two groups. Optical coherence tomography was used to evaluate the fibrous cap thickness (FCT) and the mean lipid arc. Besides, Intravascular ultrasound was used to evaluate the volume of the atherosclerotic plaques at baseline and follow-ups (6 months and 12 months).

RESULTS Low-density lipoprotein cholesterol (LDL-C) significantly reduced from baseline to 6-month follow-up but remained stable till 12-month follow-up in both groups. However, the extent of the reduction for LDL-C did not show difference between the two groups. Fibrous cap became thicker under the therapy of statin in both groups. However, the absolute and percent change in FCT in ACEI group and its counterpart group were not that discrepant both at 6-months and 12-months follow-up. For the absolute and percent change in mean lipid arc, we also did not find difference both at 6-months and 12-months between the two groups. Furthermore, IVUS also has shown that the absolute and percent change in normalized total atheroma volume and percent atheroma volume has no obvious difference among the two groups.

CONCLUSIONS The progression of coronary atherosclerosis was not discrepant between patients who have taken ACEI/ARB and their counterparts. The present study did not find that ACEI/ARB has an effect on the regression of coronary plaques under the therapy of statin.

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Mitral valve repair versus replacement for ischemic mitral regurgitation: a systematic review and meta-analysis

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OBJECTIVES The optimal surgical strategy for the management of ischemic mitral regurgitation (IMR) remains a matter of debate. Our aim was to evaluate the effectiveness and safety of mitral valve repair (MVr) and mitral valve replacement (MVR) in these patients.

METHODS Relevant studies published before April 2016 were collected in several databases and analyzed with Revman 5.3.

RESULTS Twenty seven studies (1randomized controlled trial, 26 observational studies) with 4837 patients were included. Pooled analysis of the observational studies showed significantly reduced peri-operative mortality [relative risk (RR) 0.50; 95% confidence intervals (CI), 0.38-0.67; I2=34%; P<0.00001] following MVr, while the randomized controlled trial showed no difference between groups (RR, 0.40; 95% CI, 0.08-2.01; P=0.26). At long-term follow-up, late mortality rates were similar between the MVr and MVR group (RR, 0.85; 95% CI, 0.66-1.09; I2=38%; P=0.20). Pooled analysis showed the recurrence of at least moderate mitral regurgitation (MR) was higher following MVr (RR, 5.26; 95% CI, 2.88-10.97; I2=44%; P<0.0001).

CONCLUSIONS Based on the meta-analysis of the current relevant literature, MVr for IMR may reach a better outcome than MVR in IMR patients without basal aneurysm/dyskinesis, significant leaflet tethering and severe LV remodeling. MVR is indicated for patients identified as high risk for postoperative MR recurrence. Larger prospective randomized trials are needed to further compare long-term survival and freedom from re-intervention.